

What Is Claimed Is:

1. A method for an exchange of data in messages between at least two users connected by a bus system and having separate time bases, comprising the steps of:
  - causing the at least two users to transmit data via the bus system in the messages;
  - causing a first one of the at least two users, in a function as timer, to control the messages as a function of time such that the first one of the at least two users repeatedly transmits a reference message including a first time information regarding a time base of the first one of the at least two users, via the bus system at a specifiable time interval;
  - causing at least a second one of the at least two users to form a second time information in accordance with a time base of the at least second one of the at least two users, as a function of the first time information;
  - ascertaining a correction value from the first time information and the second time information; and
  - causing the at least second one of the at least two users to adapt as a function of the correction value at least one of the second time information and the time base of the at least second one of the at least two users.
2. The method according to claim 1, further comprising the steps of:
  - subdividing the specifiable time interval into timing windows of a specifiable length; and
  - transmitting the messages including the data in the timing windows.
3. The method according to claim 2, further comprising the step of:
  - combining the reference message and subsequent ones of the timing windows up to a next reference message to form a first cycle of at least one of the specifiable length and a specifiable structure, wherein:
    - the specifiable structure corresponds to the specifiable length, number, and time position of the timing windows in the specifiable time interval following the reference message.

4. The method according to claim 3, further comprising the steps of:

- combining a plurality of first cycles of a same specifiable structure to form a second cycle; and
- repeatedly transmitting messages in the second cycle in timing windows having a time interval greater than a time length of the first cycle.

5. The method according to claim 3, further comprising the steps of:

- starting each first cycle with the reference message; and
- causing the at least second one of the at least two users to determine an interval of the time base of the at least second one of the at least two users with respect to the time base of the first one of the at least two users.

6. The method according to claim 1, further comprising the step of:

- ascertaining the correction value from a difference of the specifiable time interval of the first one of the at least two users and another time interval of the at least second one of the at least two users.

7. The method according to claim 1, further comprising the steps of:

- omitting a cyclical message transfer in at least one timing window of one of a first cycle and a second cycle; and
- transmitting arbitrating messages in the at least one timing window.

8. A device for an exchange of data in messages between at least two users connected by a bus system and having separate time bases, comprising:

- an arrangement for causing the at least two users to transmit data via the bus system in the messages;
- an arrangement for causing a first one of the at least two users, in a function as timer, to control the messages as a function of time such that the first one of the at least two users repeatedly transmits a reference message including a first time information regarding a time base of the first one of the at least two users, via the bus system at a specifiable time interval;

an arrangement for causing at least a second one of the at least two users to form a second time information in accordance with a time base of the at least second one of the at least two users, as a function of the first time information;

'an arrangement for ascertaining a correction value from the first time information and the second time information; and

an arrangement for causing the at least second one of the at least two users to adapt as a function of the correction value at least one of the second time information and the time base of the at least second one of the at least two users.